REMARKS

This correspondence is in response to the Final Office Action mailed January 17, 2006 in which Claims 1-5, 8-12, 16, 26-30, 33-37 and 40 were rejected and Claims 6, 7, 13-15, 17-25, 31, 32, 38, 39 and 41-49 are objected to as being dependent upon a rejected base claim, but are indicated to be allowable if rewritten in independent form including all the limitation of the base claim and any intervening claim. It is respectfully submitted that in light of the arguments, the application is now in condition for allowance.

The Office Action rejected Claims 1, 2, 3, 8, 9, 10, 26, 27, 28, 33 34 and 35 under 35 USC § 103(a) as being unpatentable over US Patent No. 6,449,489 to Lu et al. in view of US Patent No. 6,505,053 to Winters et al. and further in view of the admitted prior art. Claims 4, 5, 11, 12, 16, 29, 30, 36, 37 and 40 are rejected under 35 USC § 103(a) as being unpatentable over Lu in view of Winters and further in view of the admitted prior art as applied to claim 1 above, and further in view of US Patent No. 6,636,574 to Mallette et al. Claims 6, 7, 13, 14, 15, 17-25, 31, 32, 38, 39 and 41-49 are objected to as being dependent upon a rejected base claim.

Applicants' undersigned attorney conducted a telephone interview with Examiner Cho on April 19, 2006. Applicants thank Examiner Cho for his helpful suggestions during the interview.

During the telephone interview, Examiner Cho requested clarification of some of the claim terms. As known to one skilled in the art, a transfer function is a mathematical representation of a relation between an input and an output of a system (see http://en.wikipedia.org/wiki/Transfer_function). A path transfer function is the transfer function of a path from a transmitter to a receiver (see page 2, lines 6-7). An envelope is an imaginary line joining successive signal peaks (see Gibilisco, The Illustrated Dictionary of Electronics, 8th Ed., McGraw-Hill, 2001). A derivative is an expression representing a rate of change of a function with respect to an independent variable, such as time (see id.).

As discussed during the telephone interview, none of the cited references disclose "deriving values for the derivative of the envelope of the path transfer function for said radio signal," as recited in independent Claims 1, 8, 16, 26, 33, and 40. Nor do the cited references disclose using such derivative values to compute an estimate of Doppler spread, as is also recited

in independent Claims 1, 8, 16, 26, 33, and 40. In fact, the cited references do not teach computing Doppler spread. Rather, Lu and Winters disclose determining Doppler shift. While it may be known in the art to determine Doppler spread from a plurality of Doppler shifts (as Doppler spread is typically calculated as the difference between the minimum and maximum values of Doppler shift), the cited references do not teach or suggest estimating Doppler spread from derivative values of the envelope of the path transfer function, as recited in the claimed invention.

For each of the foregoing reasons, it is respectfully submitted that the rejection of independent Claims 1, 8, 16, 26, 33, and 40 is overcome. Since each of Claims 2-5, 9-12, 27-30, and 34-37 depend from one of independent Claims 1, 8, 16, 26, 33, or 40, these dependent claims are also patentably distinct from the cited references for at least the reasons described above.

Applicants expressly maintain all traversals and arguments presented in all previously filed amendments.

CONCLUSION

In view of the foregoing remarks presented above, Applicants respectfully submit that all of the Claims of the present application are in condition for allowance. It is respectfully requested that a Notice of Allowance be issued in due course. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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